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SOME REFLECTIONS ON THE USE OF LANGUAGE IN THE NATURAL SCIENCES [1]

ONE of the ideals of the natural sciences, splendidly if but partially realized in some of them, is the discovery and formulation of a structure common to diverse processes, in terms of which the behaviors of qualitatively heterogeneous things can be systematically understood and controlled. To take just one series of examples, consider such superficially unrelated phenomena as the behavior of a tear rolling down a human cheek, the rise of sap in the stems of plants, the motion of a planet through the stations of the fixed stars, the action of a violin or a trumpet when producing sounds, or the boiling of a kettle of water standing over a flame. In spite of the manifest and irreducible differences between these activities, modern science has taught us to recognize in them a common pattern. These qualitatively incommensurable processes are shown in the science of mechanics to possess common features and an identical mode of action; and, accordingly, alterations in them which may at first sight appear to be randomly spontaneous are disclosed to depend upon a repeatable structure of relations.

Such pervasive structures are formulated by the principles of the natural sciences. And it is a truism to note that the *content* of such principles is not anything which can *literally* be seen, heard, or felt—it is not a matter for visual, auditory, or tactual experience. For the common pattern of physical changes can be exhibited only symbolically, through the medium of language. It is language and language alone which renders what is possessed in community by existentially distinct processes, and which, as the familiar phrase puts it, reduces heterogeneous things to a common denominator. Just as in the economic market money is the medium in terms of which qualitatively incommensurable goods can be systematically compared, so more generally language is the means by which existentially unique processes are equated, ordered, and understood.

[1] Read at a Symposium on "The Theory of Language," at the Conference on Methods in Philosophy and the Sciences, New School for Social Research, New York City, May 6, 1945.

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The rôle of language in science has been often recognized; indeed, according to a famous and influential dictum, science is nothing but a well-made language. This dictum has long inspired the conviction that our ignorance of nature's ways can be dissipated through the institution of an appropriate system of notation; and even in our day, a panacea for almost every variety of social evils has been found in certain proposed alterations of current linguistic habits. However, the dictum rests upon a conception of human psychology which is no longer credible; and, in any case, science certainly involves more than the institution of an adequate method of symbolic representation and manipulation. Nevertheless, though Condillac's dictum states something less than the whole truth about science, it does express a fraction of it. Many of the distinctive traits of the scientific enterprise are embodied in its mode of using language, so that the character of its symbolism is one mark which differentiates science from every-day inquiry and common-sense beliefs. The following somewhat desultory reflections are intended to call attention to some features of the natural sciences—in particular, to the deliberate diminution of *vagueness* and of *unspecified usage* in their symbolic structure —features which contribute to the achievement of an adequate symbolic rendering of pervasive structural patterns in physical processes.

I

An arresting and frequently disturbing feature of every-day language is the vagueness of its words and phrases. This phenomenon was well known to the ancients, and they constructed instructive puzzles based upon it. The following is a modernized version of one of their paradoxes. We commonly distinguish men that are *bald* from those that are not. But under what circumstances is a man to be so designated? It seems at first sight plausible to say that a man is bald under the following two conditions: (*a*) if a man has *no* hairs on his head; and (*b*) if he has $n + 1$ hairs, *provided* that he would be bald were he to have just n hairs. For surely, so it might be argued, the addition of a *single* hair does not transform a bald man into one who is not bald. However, a moment's reflection shows that were we to accept *both* parts of this attempted definition of "baldness," *all* men with any finite number of hairs on their heads would have to be called bald—a patently absurd outcome. The paradox is immediately resolved, however, if we note that the word "bald" as ordinarily used is decidedly vague, that the men who are called "bald" are not precisely distinguished from those not so described, and that therefore the sec-

ond part of the proposed definition must be rejected if the customary usage of the word is to be retained.

This illustration is trivial and perhaps amusing. However, it is cited not for entertainment, but for the sake of several important observations which may be attached to it.

(1) It is essential to note that the vagueness of language does not arise from lack of *relevant knowledge* on the part of those who employ it. Thus, even if it were generally known exactly how many hairs each man possesses, the word "bald" in its current usage would still be vague. Vagueness has its source in the fact that *habits of usage* are not *determinate* in applying linguistic expressions to certain ranges of objects. Stated more explicitly, a word is vague if the things *habitually* characterized by it are not sharply distinguished from those things which are *habitually* denied that characterization—with the consequence that for some things falling within its range of application the use of the word is indeterminate. The occurrence of vague expressions thus testifies at once to the existence of experienced *continua* of qualities and dispositions, and also to the absence of *fixed habits of discrimination* between segments of such continua. Accordingly, the vagueness of linguistic terms can be diminished (though perhaps never completely eliminated) only through the deliberate *reconstruction* of language habits so as to institute sharper conventional delimitations of qualitative differences.

It is not always desirable or useful to diminish the vagueness of language. In poetical discourse, vagueness is often an advantage rather than a defect. And in the context of ordinary affairs, nothing worthwhile would be gained by making such words and phrases as "bald", "moving quickly", or "sticky" more precise than they in fact are. On the other hand, it is obvious that vague language can be a serious hindrance to the execution of social policy as well as to theoretical research. The vagueness of the adjective "adult" in its ordinary usage is intolerable for the purposes of the law, and it is redefined in the latter context in terms of chronological age. Again, though in many affairs of life we manage very well with such vague phrases as "moving quickly" or "sticky", we would be utterly hamstrung in physics and chemistry if we possessed no more precise ways of formulating the behavior of things than by saying, for example, that light moves very quickly or that some liquids are more sticky than others. In these sciences we replace such vague expressions by highly precise ones, such as "velocity" and "degree of viscosity".

It is worth at least passing mention that precision in the usage of language is deliberately instituted in the sciences in order to

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make possible the formulation of *general laws*, and thus to render symbolically the *structures* of mutual dependencies of things and their properties. The diminution of vagueness is not undertaken simply for the sake of the formal ideal of an absolutely precise vocabulary. It is idle pedantry to demand the same degree of precision in *every context*, independent of the special objectives for which a symbolic system is required. On the other hand, it is often a sign that inquiry is achieving a more subtle and comprehensive organization of knowledge, if vague terms must be replaced by more precise ones. For an increase in the precision with which language is used indicates that differences hitherto unnoticed or regarded as unimportant are being recognized as determining factors in the structure of physical processes. Precision of language is achieved through an explicit formulation of rules of usage; and there are many special techniques which may be employed to attain this end. In the physical sciences, counting and measurement are the preeminent, but by no means exclusive, ways for instituting less vague language. It is indeed a naïve conception which identifies precision with quantitative determination. That supposition has led many workers in various fields of social studies to become furiously and sometimes exclusively occupied with measuring anything for which they can devise a scale—as if quantitative discrimination were the primary objective of knowledge, and as if a highly precise vocabulary were sufficient to constitute a science.

(2) It follows from this account of vagueness that whenever a term in current usage is redefined so as to be less vague, a *new* usage is introduced for that term, and a familiar concept is replaced by a *fresh* one. This simple point helps to explain why commonsense notions are so difficult to analyze, why there is the widespread conviction that intellectual analysis mutilates what it analyzes, and why, in particular, the formulations of the physical sciences are so often believed to be unfaithful to the vivid, concrete reality of familiar things and processes.

Suppose, for example, that one wished to analyze the meanings of such expressions in daily usage as "justice", "personality", "disease", "heat", "necessity", or "cause". These words are unquestionably vague, to say nothing of their being ambiguous. But an analysis of the meaning of any one of them, "justice", for example, is usually required to formulate the common structure of the situations to which the word is applied, and thereby to express the meaning of the word with the help of a longer but *synonymous* expression. However, if the word is vague, not only is the range of its application indeterminate; it also is most unlikely that any expression or combination of expressions in the language will con-

vey the customary sense of the word—for the penumbra of indeterminateness associated with one set of expressions in the language does not in general coincide with the penumbra associated with another set. Accordingly, when a definition for a term in common usage *is* proposed, the proposal will usually involve a *revision* or *reconstruction* of the initial usage of the term in question, if only because the defining phrases will tend to restrict its original vagueness. It is therefore perhaps inevitable that most proposed analyses of the meanings of linguistic expressions in common usage tend to produce a feeling of discomfort in their users, and to give rise to the general sense that definitions "leave out" something ineffable but important, or that analysis corrupts that which it pretends to analyze. It is also understandable why certain notions, like *goodness* and *causality*, are so often claimed by philosophers to be *inherently* unanalyzable: for if the adjective "good" is vague, no other word or phrase (in terms of which an analysis might be stated) will be strictly equivalent to it, simply because of the unique area of vagueness associated with each expression in the language.

The feeling that something vital is lost in the process of analysis and definition is accentuated when words like "heat", "combustion", or "disease" are taken over from every-day language and assigned a precise, technical usage in some special department of science. For as a consequence of such technical refinements, the customary human associations and overtones of such terms are eliminated; and in its new usage, the range of application of a word as commonly employed coincides only in part with the new range specified for it. Those for whom every-day language provides the only adequate measure of reality rather naturally conclude, therefore, that the general statements of the natural sciences —since usually they can not be translated without remainder or irrelevant additions into the language of daily life—distort the true character of their subject-matter. According to Bergson, for example, there is something "artificial in the mathematical form of a physical law and consequently in our scientific knowledge of things"; and he assigns to philosophy the task of transcending "the geometrizing pure intellect" by reintroducing us "into that more vast something out of which our understanding is cut off and from which it has detached itself" through its symbolic rendering of natural processes. One motivation of Bergson's philosophy thus seems to be rooted in his felt disparity between the vague discourse of daily life and the relatively more precise language of science.

But unless one adopts the absurd conception of knowledge, according to which the goal of thought is an intuitive, empathic iden-

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tification with the things to be known, there is very little substance in Bergson's critique of scientific knowledge as "abstract," and of language and symbolism as impediments to knowledge. It is undoubtedly the case that thought and analysis are selective activities; and perhaps nothing shows so clearly their selective character as the constant reconstruction which language must undergo in the interest of precise formulation. But since reflective analysis does not aim at a reduplicative formulation of whatever exists, such selection and reconstruction do not entail any scepticism concerning the ability of scientific inquiry to achieve its proper function. In particular, although when the vagueness and functions of language are borne in mind it becomes incredible to suppose that the *structure of any language* reflects (or is isomorphic with) the *structure of what it expresses,* the symbolic systems of the sciences are capable of rendering the mutual dependencies of things in more inclusive and subtle ways than the language of daily use can manage to do.

(3) One final point requires to be made in connection with vagueness. Systematic formulations are normally achieved in the natural sciences, not by employing terms *referring* directly to matters of *familiar experience,* but by introducing highly precise expressions defined within the framework of theoretical assumptions; and such expressions often signify properties of things that are specified as the *limiting* termini of non-terminating serial relations. Accordingly, expressions are instituted which, simply as a consequence of their extreme precision, appear to represent nothing identifiable in the subject-matters explored. It follows that statements containing such expressions are *prima facie inapplicable* to anything on land or sea.

An example will help to make more evident the problem that is thus engendered. In ordinary affairs we distinguish between bodies at rest and those in motion; and we also distinguish between different speeds with which bodies move. But the term "speed" is too crude a characterization for the purposes of physical science, and as everyone knows physicists distinguish between "velocity" and "acceleration" in order to formulate the laws of bodies in motion. Now consider the expression "moving with constant velocity"—to what class of motions is it to be applied? The velocity of a body is sometimes defined as the time-rate of change of position of a body along a straight line; and a body can be characterized as moving with constant velocity only if the ratio of the distance a body moves to the time of its motion is constant during some interval of time. However, in saying that the velocity of a body is constant, we are asserting that the distance covered during

each unit of time remains the same—when the unit of time, which for example may be an hour, is arbitrarily specified. It is clear, therefore, that "constant velocity" so construed represents an *average value* of a ratio—since, though the distance covered by a moving body may be constant when one specified unit of time (say, an hour) is taken, the ratio of distances to times may vary if a *smaller* unit of time (say a minute) is selected. But in order to be able to state the laws of motion in a perfectly general manner—so that they may be applicable to all types of physical phenomena and however the unit of time is chosen—the notion of the velocity of a body "at an instant" is introduced. The expression "velocity at an instant" thus represents a culminating redefinition of an initially vague term used to describe the motions of bodies. On the other hand—and this is the point around which serious methodological problems cluster—no overtly identifiable motions of bodies can be characterized as having a "constant instantial velocity." The net outcome thus seems to be that in redefining familiar distinctions so as to make them highly precise, certain "limiting concepts" are introduced into the language of science which *apparently* have no pertinent use in connection with empirical subject-matter. In consequence, many thinkers have been led to suppose that such statements are in some sense "self-authenticating," that they require no experimental warrant, and that they are guaranteed entirely by the symbolic operations to which they are subject.

But this supposition falls rather generously short of the truth, and the difficulty which has been briefly indicated is not a fatal one. For when the laws of the natural sciences are formulated with the help of "limiting concepts," those theoretical formulations are always required to be supplemented by *various specific rules of application*—rules which coördinate the highly precise terms of theory with *relatively vaguer terms* of overt practice.

The use of language in the natural sciences thus exhibits a characteristic rhythm. Linguistic expressions which are initially vague are replaced by others less vague; and in order to achieve a maximum of generality with economy of formulation, various "limiting concepts" having a minimum of vagueness are finally instituted. On the other hand, in order to apply those formulations to overtly experimental material, the ideal of absolute precision must be relaxed: the relevance of theoretical formulations to matters of direct experience must be indicated through the use of language *less precise* than the language of theory, though usually *less vague* than the language of every-day discourse. This ebb and flow in the adoption of various degrees of precision is one of the

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most arresting features in the scientific use of language; and a central task for any philosophic critique of the "abstractions" of science is to exhibit the functions of each stage in this series of transformations. For such a critique must aim to prevent the hypostatization or reification of instrumental functions into mysterious, inaccessible agents, and to show how scientific language, in conjunction with overt experimental procedure, can render, but without illusion, the pervasive interrelations of natural processes.

II

This brings me to a second feature of language which, though closely related to the phenomenon of vagueness, warrants special attention. Consider, first, an example taken from ordinary discourse. Children learning to use English may be taught that the word "valley" refers to depressions between elevations of land. Presently, however, they find the word employed in such a sentence as "The boat was invisible in the valleys of the sea"; and they discover that its initial range of application is extended to include depressions between elevations of water as well as of land. But subsequently they may come upon such statements as "He dwelt in the valley of the shadow of death"; and though they may at first be perplexed by this curious use of the word "valley", they become sensitive to certain analogies between its use in this new context and its previous uses. It is quite unlikely that most children or their elders ever learn to state clearly the conditions under which the word may correctly be used in this novel way; nevertheless, people develop unformulated habits governing this extended employment of the word, and can distinguish between true and false statements containing the word in this usage.

This example makes evident that an expression having an established usage *in one determinate domain* may acquire radically new though related ones through *a gradual shift* in the context of usage. Such new senses for expressions are ordinarily not established through any explicit formulation of rules of usage; and in many cases, certainly, no serious confusions arise as a consequence. Nevertheless, the uncritical extension of the range of application of an expression, even when guided by analogies, is a common source of error and intellectual futility. It easily engenders the conviction that since the *same expression* is employed throughout a series of contexts, there must be a *generic meaning* common to all its uses—as though, to use a happy image of Wittgenstein, continuous fibers must stretch throughout the entire length of a hawser in order that a ship be securely tied to its pier. It fortifies the

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tendency toward hypostatization, toward the introduction of *substantial but essentially mysterious agents and entities* for which the *relational-terms* of scientific discourse are taken to be surrogates. It easily produces the obscurantist conceptions of nature which are a consequence of construing the meaning of statements occurring in one context of operations in terms of meanings possessed by statements in quite different contexts. And it leads easily to the facile but uninformed scepticism expressed by a well-known novelist, according to whom modern science "is simply incomprehensible. Every statement is a paradox, and every formula an outrage on common sense"—a conclusion generated entirely by a failure to attend to the meanings of scientific statements in terms of the specific habits or rules of usage with which they are associated.

This partial catalogue of possible consequences of the uncritical extension of language represents dangers encountered in the scientific as well as in the daily use of language. They are dangers which can be overcome only by carefully *specifying* the rules of usage for linguistic expressions in *each context* of their application, and by resolutely interpreting the meanings of statements on the basis of such rules. The ideal end at which science aims in the construction of its language is the exclusion from its symbolism of all expressions which have no *specified* usage. And the substance of the methodological program currently known as "operationalism" is that of supplying such *rules* of usage for expressions not already possessing them. In the remainder of this paper I wish to cite a few examples from the sciences which illustrate how some of the cited dangers have been incurred, and how, in some cases at least, they have been overcome.

(1) Algebra, as is well known, was first developed as a generalized calculatory device for handling arithmetical subject-matter —the integers, their ratios, and their relations. But presently the algebraic algorithm produced certain curious combinations of symbols—obtained in the process of solving equations—which obviously did not "stand" for any of the familiar arithmetical numbers. Accordingly, on the assumption that every combination of symbols obtained by *apparently* employing the accepted rules of symbolic manipulation *must* stand for *something,* mathematicians thought it necessary to postulate various new kinds of "mathematical entities." Like a veritable sorcerer's apprentice, the machinery of algebra thus produced the negative numbers, the imaginary numbers, and the irrational or surd numbers; and the platonic mathematical heaven became thickly populated with these semi-mysterious entities, conceived as subsisting in their own right

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antecedently to the symbolic operations which merely called them to men's attention. However, a careful study of the procedures involved in the postulation of these entities—a study which has required something like 200 years of devoted thought to complete —has finally shown how entirely gratuitous has been the postulation of these new kinds of numbers as substantial beings. By specifying fully the rules of usage governing expressions ostensibly representing these hypostatic beings, modern research has made plain that the hypostatization depends on *covertly and illicitly* extending the use of certain symbolic operations from domains in which they had been well-defined into domains for which they had *not been defined at all.* The problem which thus faced mathematicians was that of constructing *definitions* for certain symbolic operations, and of finding fruitful *interpretations* for symbolic complexes obtained by these operations. And when appropriate definitions and interpretations were introduced, it was seen that the curious combinations of symbols which previously were taken to represent self-subsistent but not quite intelligible platonic entities were symbolic of *identifiable relations between identifiable things*—of operations between integers in some cases, of operations upon geometrical figures in others, and so on. It is worth noting that through this analysis the power of algebraic procedure has been increased rather than diminished, while at the same time the functions and limitations of symbolic manipulations have been clarified.

A similar moral may be drawn from the history of higher mathematical analysis. Every adult understands what is meant by the word "sum" in such contexts as "the sum of 1 and ½" or "the sum of 1 and ½ and ¼", where only a finite series of numbers are to be added. Does the word mean anything when it occurs in such contexts as "the sum of 1 and ½ and ¼ and ⅛ and so on to infinity"? Mathematicians at first supposed that in talking of the sum of an infinite series of numbers they were employing the word "sum" in its *customary* sense and in accordance with *customary* rules of usage already established for finite series. But they presently discovered that in simply extending the use of the word to infinite series fatal contradictions arose; and they finally recognized that the word "sum" for infinite series was *not defined* by the rules which govern its customary use. In other words, it does not follow that because the expression has a determinate meaning in contexts of adding a finite series of numbers, it has a determinate meaning for combining an "endless" sequence of numbers. Mathematicians finally formulated rules for combining such endless sequences; but they still take inordinate pains to note

that such sequences possess no "sums" (for this word is reserved for the addition of finite series of numbers), though in certain cases they possess something called "the limit of the sum." Moreover, the expression "limit of the sum," if construed in terms of the rules which define it, can not be taken to represent an unknown "something" transcending the series of numbers; it represents in a compact fashion a complex *pattern of relations* between members of the series of numbers. In this instance, also, a careful specification of rules of usage makes *ad hoc* postulation of "entities" quite gratuitous; and it makes evident the *dependence* of apparently self-subsistent mathematical subject-matter upon the process of *symbolic construction.*

(2) Consider next some examples from physics. In traditional formulations of the laws of mechanics, the motions of celestial bodies are usually explained in terms of a "force of attraction" acting between each pair of bodies. However, the word "force" was taken over into theoretical mechanics from the language of daily practice; and it was perhaps inevitable that explanations of motions in terms of forces should therefore be associated with the notion that strains and tensions are involved in the behavior of celestial bodies which are in some way analogous to those directly experienced when human muscles are exercised. But when mechanical forces are conceived in this manner, they become inaccessible to direct or indirect observation: they are then mysterious *agents,* whose operations become matters *requiring* explanation instead of serving as explanations for other things. Accordingly, the view became widespread—among practicing scientists as well as among laymen—that although we may know what attractive forces *do,* we are quite ignorant, and must forever remain ignorant, of what they "really" *are.* But this hypostatization of forces into agents was found to be altogether unnecessary when physicists finally proceeded to formulate carefully the rules in accordance with which the word "force" needs to be employed in mechanics, and in terms of which the meaning of the word requires to be understood. It then became evident that the word is a short-hand symbol for a complex system of *relations* upon which the behavior of bodies depends—for example, relations between the masses and relative accelerations of bodies and their distances from one another. This analysis did not show, as is sometimes maintained, that the word "force" is a "mere word," an empty sound; it did reveal the office of the word in rendering systematically and symbolically a pervasive structure of physical behaviors, and it did make clear that this office could be exercised without converting patterns of behavior into unidentifiable agents *producing* that behavior.

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An interesting variant of the above example is found in the history of the term "energy" as employed in physics. The beginning student in physics is usually told that by the "energy" of a physical system he is to understand the capacity of the system to do work; and he soon learns that a certain function of the mass and velocity of a moving body (its kinetic energy) is a measure of this capacity. It also turns out that when the equations of motion for an isolated physical system are transformed in certain familiar ways, a certain quantity remains constant—a quantity which is the sum of two others, one of them being the kinetic energy of the system. This constant quantity is called the "total energy" of the system; and the second of the two terms of which it is the sum is then rather suggestively designated as its "potential energy." In physics, as in the case of algebra, the algorithm of symbolic manipulations thus gives rise to new combinations of the elementary symbols; and, as in the case of algebra, these new symbolic complexes are often taken to denote something substantial but inaccessible, underlying physical processes. Thus, the statement that the total energy of an isolated mechanical system remains constant throughout any transformation has frequently been construed to mean that a mysterious something called "energy" now takes the form of kinetic energy, now the form of potential energy, although it maintains its substantial identity whatever its accidental phenomenal form may be. It is not difficult to see why physics appears as paradoxical and as an outrage to common sense, when this mode of interpreting physical principles is applied to such a statement as that the mass of a physical system may be transformed into energy. However, the air of paradox disappears entirely when words like "mass" and "energy" are understood in terms of the specific rules governing their use. It then turns out that the expression "energy of a system" does not represent some self-identical but hidden "entity" or "agent" —but is an economical device for formulating a constant *pattern* of behavior exhibited by physical bodies.

But perhaps the, by now, classical illustration of the rôle of explicitly formulated rules of usage in the development of physical theories is provided by the relativity theory. Most people are confident that the statement "Two events are simultaneous" has a determinate and unambiguous sense; and there is indeed no doubt that within the context of every-day practice the word "simultaneous" has such a meaning. However, the customary use of the word in connection with immediately practical matters was gradually extended so as to cover the temporal relations of events occurring under highly complex conditions. And shortly after

the turn of the present century it was recognized that for this *extended* application, the word was *not defined* at all, since it had no *specified* usage. The rest is well-known history: rules of usage for this word were carefully instituted, and the physical theory of relativity was developed. The construction of this theory involved much more than the institution of definite rules of usage for expressions hitherto employed without a specified meaning. But the development of that theory does exhibit the realization of one of the ideals of scientific language—namely, the exclusion of a symbolic construction for which no determinate conventions of usage have been specified.

(3) Let me now briefly indicate the failure of this ideal in some social studies. Historians, sociologists, and political theorists often employ the language of physics in formulating the results of their researches. Thus, their writings contain such phrases as "the force of personality," "the intellectual energy of a community," "the friction involved in competitive behavior," "the acceleration of social change," or "the osmotic pressure of cultural infiltration." Such expressions are frequently innocent of pretentiousness; they are literary devices for stating in arresting language what everyone understands. And if they deceive no one, it is misplaced hygienic zeal to demand the elimination of such metaphorical figures of speech from the language of social analysis. However, the use of the language of physics in this context is not always innocent. Such language is sometimes employed to lend an air of profundity and precision to sociological statements—traits not always supported by a closer analysis; and, indeed, highly debatable if not irresponsible opinions are passed off under the mask of a language for which no determinate rules of usage are available. In discussing the rôle of religious thought and of economic institutions in the development of modern capitalistic society, for example, it is utterly futile to maintain that one of these has been a "greater force" than the other in determining the character of our society—until the rules of usage for the expression "greater force" have been made definite. In a recent and widely hailed treatise on sociology, the author paraphrases the Newtonian laws of motion for societal changes, and submits that sociology has finally been placed on a firm "scientific foundation" in consequence. But the writer manifests no sense of obligation to specify how phrases such as "social force" or "acceleration of social change" are to be employed. For example, nothing is said as to how such forces are to be compared, what it means (if anything) for such forces to be combined in accordance with the parallelogram law of addition, and the like. In this instance,

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certainly, the ideal of instituting *specified* usages for all symbolic constructions, an ideal so faithfully pursued in the natural sciences, has not even been envisaged.

I do not for a moment wish to deny the suggestiveness and stimulus which come from the extension of linguistic expressions from an initial domain of application to new fields. On the contrary, I have tried to indicate how, in the mathematical and physical sciences, such extensions, provoked by vaguely felt analogies and frequently generated by the automatism of a symbolic system, may yield more general and more efficient symbolic instruments. Nevertheless, such extensions in usage must always be critically scrutinized and supplemented by explicit rules of usage—if the price in initial confusion that must often be paid for such advances is not in the end to outweigh the advantages that may accrue from them. Symbolic operations are never self-authenticating in empirical inquiry, and no error is more serious or more insidious than that which arises from the tacit supposition that linguistic manipulations guarantee the representative character of the symbolism employed.

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COMMENTS AND CRITICISM

MR. MURPHY ON GOOD-WILL

In Mr. Murphy's recent book,[1] in a section under the caption, "Moral Order and Moral Freedom," occur the following sentences: (1) "All the goods we can identify in experience possess their goodness in their capacity to satisfy interests, wants, desires" (p. 106). (2) ". . . when we understand ourselves and our purposes we shall find it hard, I think, to deny that good will . . . is a great good" (p. 117). (3) "A 'good will' . . . is a will freely, and responsibly, directed to the good attainable in such a community," a community where "men coöperate freely through their reasonable acknowledgment of mutual responsibilities, as members of 'a kingdom of ends'" (p. 117).

It is clear enough that these sentences are very important since they are about what is very important. It is also clear, I think, that many of the people who, in common with Mr. Murphy, say that (1) above is true, have denied that (2) is true, or at any rate have neglected to make any point of it. Mr. Murphy thinks that

[1] A. E. Murphy, *The Uses of Reason*, New York, Macmillan Company, 1943.

these sentences are quite consistent and true. And that is the point which I should like to consider.

Let us first of all be reminded of the significance of Mr. Murphy's first sentence. This sentence is a definition. It purports to tell us not simply how Mr. Murphy intends to use the word "good," but also how it actually is used by people who talk and read English. It does seem odd that people who use words should have to be told how they use them, but Mr. Murphy, no doubt, has in mind a forewarning against certain philosophical corruptions of the English tongue. In any case we may be sure that Mr. Murphy does intend to use it in the way described. What now is that way? Well, here are some illustrative sentences: Drinking coffee is good; Listening to Mozart is good; Walking in the snow is good; Scratching your itches is good. (Dear Plato!) In all these cases the drinking, the listening, the walking, the scratching are related to certain other facts upon which the respective goodness of each of these depends. These are facts of the kind: I am thirsty; I want to listen; I like to walk; I itch.

So far this is clear, but I should like now to carry this on a little further. Consider the instance: Drinking coffee is good. Is it true or not? Suppose I make the statement, and then you watch me, verifying my coffee statement. I come down for breakfast, pour my coffee, and smile as the dark-brown steam fills my cup and feasts my nostrils. I sip it hot and you can hear my relish across the table. Smack! Smack! I say, "That was good! I guess I'll have more." I do have more. I am clearly delighted with coffee. If anyone asks: "Is drinking coffee good?" I can tell him. If anyone asks: "Is drinking coffee a great good?" let him watch me. I do this three or four times a day. I never refuse a cup of coffee. If, on the other hand, someone said, "Drinking coffee is good," and fairly beamed at the mere suggestion, but held his nose when you poured it and never touched it to his lips at all, you would know the beam was false, and that he was only fooling. Or, if he was really delighted at the thought, you would then make a correction. You might say: "It isn't drinking coffee that is good in your case, it is just thinking about drinking coffee that is good." So too one might enjoy pictures of people drinking coffee or simply seeing other people drinking coffee. All these are different from enjoying drinking coffee, though one's language here might be ambiguous. "Drinking coffee is good" might describe any one of these different situations.

It is clear now from this illustration that, in respect to such a sentence as "drinking coffee is good," the evidence that it is good consists in such things as people's actually drinking coffee, and

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their doing other things in order that they may drink coffee afterwards. So with eating ice cream. If ice cream were ready to use, but nobody ever cared to eat any and never did eat any, not even on the sly, who would say then that eating ice cream was good? Maybe, again, people would just like to dream about eating ice cream. But then what is good is not eating ice cream, but dreaming about eating ice cream. So, too, with gazing into blue eyes, so with seeing one's name in big letters, so poring over nickels. What is good is what men like doing, and what men like doing, when they are able, is what they do. This sounds like good English, at least like some good English.

Now I should like to notice another sentence ostensibly of the same type as those which I have just discussed. I want to discuss the sentence: "Good-will is a good." I do not want to discuss the sentence, "Good-will is a great good," since I am a bit uneasy about the expression "great good." I am going to use the expression "good-will" in a non-technical way, and I am not at all certain that Mr. Murphy would use it in that same way. I am acquainted with this third sentence above, and it seems to me to exclude what I mean to consider. Since this seems to me very strange, I am in doubt. Otherwise, I propose to use the word "good" in the way in which Mr. Murphy proposes to use it.

My question then is: "Is good-will a good?" And since this question must be a question about someone whom it may concern, let us address the question to the Good Samaritan. We will say, "Is good-will a good?" He will say, "Yes." Now, did he tell the truth? We'll have to watch him to find out. If he talks a lot about it, and likes to read about it, and admires it in some Levites he knows, well then, you may still doubt his answer. In that case you might say that he likes to think about good-will and even to watch it going on, but good-will, itself, might really give him a fright. Think of the messes and the bother that good-will might get you into. Clean hands are in any case much better than good-will. In a case of that sort, then, it would certainly be misleading to say that in his life good-will was a good. If, however, playing the detective, you follow him on the road to Jericho, you may come upon that man lying there beaten by thieves. And if you then see the Good Samaritan as "he went to him and bound up his wounds, pouring in oil and wine, and sat him on his own beast, and brought him to an inn, and took care of him," then you might have come to know something. Indeed in the life of this man, good-will was a good. Here, again, what a man wants is manifest in what he does. This man acts under no duress in caring for the helpless. The test of whether or not good-will is good is like the test of whether

drinking coffee is good. Now let me try one more instance. Was good-will a good in the life of Samuel Johnson? Let's page Boswell. Here is a passage that might have some bearing: "Coming home late one night, he found a poor woman lying in the street, so much exhausted that she could not walk; he took her upon his back, and carried her to his house, where he discovered that she was one of those wretched females who had fallen into the lowest state of vice, poverty, and disease. Instead of sharply upbraiding her, he had her taken care of with all tenderness for a long time, at a considerable expense, till she was restored to health, and endeavored to put her into a virtuous way of living."[2] What now is the answer? Yes, good-will was a good in the life of Samuel Johnson. The point, I think, is now clear.

In discussing these sentences about drinking coffee and about good-will, I have been preparing to discuss Mr. Murphy's second sentence quoted above. The sentence is: ". . . when we understand ourselves and our purposes we shall find it hard, I think, to deny that good will . . . is a great good." Now notice first of all how stricken this sentence is. It weaves in all the little tell-tale symbols of misgivings. If we ask Mr. Murphy, "Is good-will good?" does he come out boldly with the answer, "Of course, it is." No!! No doubt, if we asked Mr. Murphy, "Is drinking coffee good?" he would not find his sentence in reply so stricken with sudden weakness. Whence, then, this halting, this lameness?

Let us set down some of it to courtesy. It won't do to blast those who disagree with you into agreement, with a shot-gun contrary assertion. So Mr. Murphy lames his sentence in order not to bowl over his adversaries. So he wins them. But this is, I think, not all. Mr. Murphy also thinks that some of his friends who say that good-will is not a good do not know what he means by good-will. It's as though someone asked, "And now wouldn't a trip to the moon be nice?" And then he cautions you against a hasty answer: "Consider now carefully. There isn't much scenery on the way, no friends to greet you when you arrive, and you'll have to wear your overcoat." Then he gives you an hour to consider. He wants you to have clearly in mind what you are to react to. Now something like this is the case, apparently, with good-will. So Mr. Murphy recommends that you take the time to understand yourself and your purposes. But suppose now that this is all provided for; will our sentence now walk with a firm step? I do not think so. Why should Mr. Murphy use the expression: "We shall find it hard to deny"? Let's pass the "I think" for his courtesy. Is it perchance equally "hard to affirm"? I want,

[2] Boswell, *Life of Johnson*, Modern Library, p. 1124.

in what immediately follows, to suggest that it certainly is, and to show how this comes about.

The question is, "Is good-will a good?" Following Mr. Murphy's directions, this expression must be further specified. Try this then. Is good-will a good to those whom it concerns? This won't do, of course. For this is equivalent to: "Is good-will a good to those to whom good-will is a good?" The answer, as you can see, will flatter no one. Of whom is Mr. Murphy then saying, that to them good-will is a good? In any case very many people. This is clear from several things. "Most men under decently human conditions are by no means such fools as social scientists and cynics frequently take them to be" (p. 120). The alternative is Mr. Murphy's description of them. To them good-will is a good. The ideal cries "in the hearts and minds of men" (p. 120). Since Mr. Murphy thinks that the good and the continuance of democracy depend upon the good of good-will, it is clear that he thinks that good-will is a good to very many people. Now notice that in spite of the fact that good-will is a good to so many people, "social action on that level does not describe the way in which men always or even usually behave. It represents a good rarely now achieved and perhaps never attainable." Now what Mr. Murphy here says about good-will seems to come to something like this. To most men good-will is a good, but people are so thrifty that they seldom, very seldom, indulge themselves.

Now I want to point out the main burden of my difficulty. In what precedes, I pointed out how we use such expressions as "drinking coffee is good," and "good-will (non-technical) is good." I pointed out that drinking coffee is quite different from dreaming about drinking coffee and watching people drinking coffee, and that active good-will is quite different from dreaming about good-will with the help of a book, or watching people like the Good Samaritan or Samuel Johnson. Accordingly, to say that drinking coffee is good is different from saying that dreaming about drinking coffee is good. So, too, "good-will is good" is different from "dreaming about good-will is good." Now, recollecting these matters, I want to put the question: To most people good-will is a good, but, of course, they do not have any interest in indulging it—is there anything the matter with that sentence? Is there anthing the matter with this sentence: "To most people coffee-drinking is good, but when coffee is offered to them they seldom or never drink it." Now if Mr. Murphy thinks that there is nothing the matter with this sentence, then I think I know what he means by: "Good-will is a good." He means simply that most people enjoy spectacles of good-will. It warms them deliciously, at movies, in magazines, in

books. But if this is what he means, I can not see that democracy is safeguarded by such warmths. I do not think it would be possible to distinguish Nazis from Americans by their esthetic fluctuations in the presence of such representations.

Nevertheless, one might see how Mr. Murphy might describe this by saying that to them good-will is a good. This is not, however, all that he says. He says that to them good-will is a great good. Imagine Mr. Murphy saying: "Drinking coffee is a good and people drink a lot of it, but eating ice cream is a great good, and yet people won't eat it." Drinking coffee is a good. Eating ice cream is a great good. What would Mr. Murphy mean here by "great good"?—a greater, certainly, than drinking coffee. Good-will in any case is a great good. Consider now this sentence in relation to the first sentence quoted above. We then get something like this: Good-will possesses a greater capacity to satisfy interests, wants, desires, etc. (so it is a great good) of him whose good-will it is, than does drinking coffee when he is thirsty, etc. Now this seems to be what Mr. Murphy is saying despite the fact that he admits that good-will is rare, whereas drinking coffee is so common. Of course, coffee is available, but if a man does so thirst after another's good, what is there to hinder his putting forth his hand and loosing his purse in order to quench his thirst? Is the capacity to satisfy an interest proportionate to the strength of the interest? Does Mr. Murphy then mean that the interest in good-will is stronger than the interest in drinking coffee? If so, how does he find this out? It would commonly be supposed that that interest is stronger which is effective in determining its own satisfaction. And in the case at hand, it is admitted that people do, people in Urbana, for instance, manage to have their coffee. But unlike coffee, good-will requires special recommendations. To them good-will is a great good, but they go on being deprived of that great good. Why? Do they have sore hands and are their purses snapped?

In writing of good-will Kant stated that good-will is the one thing which can be called good without qualification. In doing this, as he makes clear, he distinguishes good-will from such things as drinking coffee, health, courage, knowledge, etc., all of which are relative to interests, wants, desires, He does not, of course, mean to deny that men have no interest whatsoever in good-will. I should think he might even admit that they have as much interest as Mr. Murphy says that they do. But Kant makes it clear that what he calls the goodness of good-will is not relative to the interest men have in it. And this now seems to be what Mr. Murphy is also bound to say. For if good-will is a great good, its qualifica-

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tion as great is certainly no function of the intensity or the quantity of the interest which people actually have in it. There is no correspondence. If there were, we should then not always have the poor with us. The alternative open to Mr. Murphy is, of course, to say that not the quantity, but the quality, of the interest is what determines the greatness of the good of good-will. My recollection is that Mr. Mill also tried some such expedient. But it did not help. It appears to me that Mr. Murphy must either abandon his first definition-proposition above, or he must leave the goodness of good-will to the mercy of that interest which by implication he has admitted is so feeble. We may, in Mr. Murphy's terms, allow that good-will is good, just as trips to the moon and heaven (a word not in Mr. Murphy's vocabulary) are very nice. But we do not always live in the land of dreams. Most of us prefer our coffee hot and our good-wills cold. Why then should we say that good-will is a *great* good?

I have tried so far to suggest by certain analogies, on the basis of such facts as, I supposed, are admitted by Mr. Murphy, what he might mean by these sentences: "Good-will is a good" and "Good-will is a great good." But I have done this, assuming in certain contexts that he meant what is commonly meant by good-will, and yet mindful that I was not clear about his use of the expression "good-will." I want now to study his language in order to probe further what he is describing. What does he mean by: "Good-will is a great good"?

Now since "is a good" is, in his vocabulary, convertible with such expressions as "people like," "people are interested in," etc., I want to adapt certain other statements of his to my purpose. These statements occur in his exposition of good-will. Here now are some of them: People like to do whatever is right (p. 115). People like to "coöperate freely, through their reasonable acknowledgment of mutual responsibilities, as members of a 'kingdom of ends'" (p. 117). People like to will "freely and responsibly," directing their wills "to the good attainable in such a community, claiming nothing [for themselves] that this common good does not warrant, and acknowledging the equal rights of others who are co-workers for its attainment" (p. 117). People like to share with others "in purposes that are mutually understood and honored," and they relish the resultant concern about each other which arises out of such coöperative action (p. 118). People like to treat each other as ends rather than merely as means (p. 117).

Mr. Murphy has not provided any illustrations in the context in which good-will is expounded, and, accordingly, what follows is my own elaboration. Men do get together in the interest of some

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purposes. Purposes are varied, of course. Some men get together to raise wages, some to conquer Europe, some to keep the streets clean, to study philosophy, to play baseball, etc. In the course of their doing so, each assumes responsibility for a certain part of the work, and in turn enjoys the fruits of the labors of all his co-workers. In the course of this coöperation, good-will, like a dew from heaven, covers their otherwise mutual contrarieties and unites them in a sweet regard. One important point about this is that though their mutual helplessness is a condition of this regard, this regard is not commensurate with any estimate of their helpfulness. Common devotion to an end, and the joy in working together, are the seed-plot of brotherliness.

I have earnestly pondered Mr. Murphy's language and this is what I have discovered in it. So this is what I now understand him to say: Most people enjoy that fellow-loyalty which crowns labors towards a common end. And I have no intention of disputing it. I want, however, to point out that good-will may flourish no matter what the purpose is. Just as there is honesty among thieves, so there is good-will among thieves, so long as each performs his appointed task in doing a nice job and so long as the den of thieves is a brother-brother family. And, in this sense, good-will is, at any rate, not so scarce as Mr. Murphy supposes. It is, I suppose, what is also meant by "esprit de corps." Every organization whose labors involve tension and great interest is likely to develop it. Tolstoi has pointed out that in war the spirit of the individual soldier is likely to be bound up with devotion to his unit. But notice now the antagonism, the ill-will which arises from precisely the same condition. Purposes of men conflict, and men coöperate in conflicting aims. Each group has its own range of good-will, and outside of that a range of ill-will. Who are the Nazis? Are they not men sharing "in purposes that are mutually understood and honored"? And what is their fanaticism but their good-will towards each other and hatred of those who oppose them?

Does Mr. Murphy now mean that to most men good-will is a great good in the sense defined? In the sense in which Mr. Murphy uses the expression "good," I fear that the assertion is true. But it is the source, then, not of hope, certainly. These varieties of good-will are what divide the earth. Mr. Murphy is eager to claim the authority of Kant for what he is saying. He even quotes the famous maxim as his own also: "So act as to treat humanity, whether in thine own person or that of another, always as an end, never merely as a means." But surely this will not do. Whereas Kant seeks to understand all rights and duties in terms of the pre-

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supposition that all men are members of a "kingdom of ends," Mr. Murphy seeks to derive their membership in such a kingdom from the accident of their participation in some common enterprise. There are, accordingly, as many kingdoms as there are groups of men joined in purpose, and they form and reform with the fluctuations in purposes and groups. If Mr. Murphy is interested in Kant's maxim within the view he recommends, and so enjoins a good-will without discrimination, it will be his task further to exhibit what that common purpose is in which all men are engaged, and in acknowledgment of which there will be peace on earth.

I have tried in the preceding pages to squeeze these sentences of Mr. Murphy. The sentence, "Good-will is a great good," I first squeezed with ordinary English pressures, and, secondly, with Mr. Murphy's special instruments. I am not adept, and I have no confidence that I have not left pure and simple in those words the limpid truth. But as for me, I need Mr. Murphy's help. I noticed above that Mr. Murphy said: "We shall find it hard to deny that good-will is a great good" and I set out to show that it was perchance equally hard to affirm. I find it hard. But I do not know whether I find it hard because I do not understand or whether, understanding, I can not affirm. Here then is my conclusion:

I have distinguished two meanings of the word "good-will." If Mr. Murphy means by "good-will" what I illustrated in the case of the Good Samaritan and Samuel Johnson, then he must admit that good-will is certainly not a great good in the lives of most men. For that it is rare, is a matter of choice. If, on the other hand, he means what I think he means, then it is not true that good-will is rare. It is common. But there are many varieties of good-will, and it will not be true that to most men the same good-will is a great good. Accordingly, the idea will not serve in his apology for democratic government.

O. K. Bouwsma

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GOOD-WILL AND GOOD JUDGMENT

I AM grateful to Mr. Bouwsma for his extensive analysis of three of the sentences in *The Uses of Reason* and gratified that he thought them worth so minute an inspection. A comparably close study of the book as a whole, or even of some of its chapters, would produce a commentary of a scope and detail of which the work is by no means worthy. Moreover, the method employed, which Mr. Bouwsma appropriately describes as that of sentence squeezing, is the one which Moore and Wittgenstein have used with good effect

in the analysis of logical and epistemological problems. Its application to moral and political philosophy should also prove enlightening. Yet it seems to me that the analysts often make matters unnecessarily hard for themselves by the very intensity of their concentration, which leads them to miss relevant considerations and forces them, in consequence, to construct a curious variety of hypothetical substitutes for the obvious meaning which a less resolutely ingenious inquirer would have noticed from the start. There are such neglected considerations in the present instance and, though I hesitate to add more enigmatic sentences to the store I have already unintentionally provided, I think it will simplify matters to point them out.

(1) Mr. Bouwsma's selected first sentence does say that all goods "possess their goodness in their capacity to satisfy interests, wants, desires." It is proper to conclude from this that unless good-will possesses this capacity it is not a good, "great" or otherwise. And since the desires in question must be someone's desires, it is further appropriate to ask *for whom* good-will is a good; i.e., whose desires it can satisfy and in what measure. It is not correct, however, to conclude from this sentence, as Mr. Bouwsma does, that in my vocabulary "is a good" is convertible into "people like" or "people are interested in." It is not *de facto* liking or interest, but the capacity to satisfy such an interest which has been said to determine goodness. It is often the case that people want things that in fact can not satisfy them and that they may ignore, and hence not want at all, others which possess this capacity. What they want or desire is in part a function of beliefs and expectations as to the kind and degree of satisfaction which wanted objects will provide. And the proof of the pudding is in the eating and its consequences, not in the wanting. This may seem, at first, a minor point, but it sheds some light on Mr. Bouwsma's further question.

(2) "Of whom is Mr. Murphy then saying, that to them, good-will is a good?" *Answer* (as in sentence 2): of us, i.e., ordinary human beings capable of the rational organization of their desires *"when we understand ourselves and our purposes."* This is the qualifying clause which Mr. Bouwsma finds puzzling and which leads him to characterize the sentence containing it as "lame" and "stricken." In fact, it contains the central point of all I had to say on the subject, and the critic, if he had lifted his eyes from the sentences quoted to the volume that contains them, should not have been surprised to find it there. It is true that sentence (1) does not itself assert that our desires are sometimes different when we understand them and that the good that will satisfy those capable of such understanding is of a distinctive character, though

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it is wholly compatible with this further assertion. But there were other sentences. And the title of the book was *The Uses of Reason,* of Part II of that book "Practical Reason," and of Chapter I of that Part, which contains these sentences, "The Context of Moral Judgment." I do think that this might have given the analyst at least a hint that the reference here made to understanding our purposes was in some way important to the theory in question. I mention this to indicate that the method of sentence squeezing does really have its limitations.

In any case the qualification *is* important, and, taken seriously, it goes a long way toward clearing up the situation. For it may quite well be true that good-will is a good and a "great" good for most men *when they understand their purposes and themselves,* in that it has the capacity to satisfy their purposes when thus organized and related to what as selves, or persons, they wish to be, and also true that most men do not actually desire it very strongly. For it is lamentably true that most of us do not, most of the time, understand ourselves and our purposes very well. The moral of my theory was that we ought to understand ourselves better and that it was out of the work of practical reasoning thus functioning that the vindication of good-will as a great good for those capable of such understanding would come.

Mr. Bouwsma seems to find it odd that, while both good-will and coffee are said to possess their goodness in their capacity to satisfy desire, "unlike coffee, good-will requires special recommendations." But perhaps here, again, he is too readily puzzled. The desire that coffee satisfies is obvious and hardly needs pointing out. The satisfactoriness of the complex *organization* of desires that find their satisfaction in the moral order which good-will makes possible is less obvious, and moralists have for centuries been making "special recommendations" in its behalf. Yes, people in Urbana do manage to get their coffee. But they got considerably less of it in 1942 and 1943 than in other years, and this was partly because the available supply of good-will (*and* good judgment) in the world had at that time proved unhappily insufficient to prevent a devastating war. It was not because they had sore hands, or their purses snapped, but because, like many of their countrymen, they had had narrow minds and sympathies that both good-will and coffee were at that time in short supply. But to make sense of this we must again refer to the clause about understanding our purposes and ourselves which Mr. Bouwsma finds so difficult.

(3) I also said that good-will, understood in its relation to the organization of desires, is a "great" good. And what could I possibly have meant by this? Many things, no doubt. What I did

mean was that, for those who understand their purposes, it is one of the greatest of goods, as I might have said that Abraham Lincoln was a great man, one of the greatest. This implies a standard of comparison in terms of which it is intelligible to say that good-will is a greater good, let us say, than coffee. Such a comparison in turn makes sense only when some genuine choice is called for in which the self that is judging must decide what on the whole will satisfy it. This comparison is not usually a matter of observed or observable lip-smacking. Nor is it an affair of measuring the intensity or quality of separate desires. The question is rather that of alternative organizations of desires and of the self which is to be satisfied in the process for, it will be recalled, it is for such a self or selves that good-will is said to be a great good. And such a question, even in the instances Mr. Bouwsma has given, is one that is capable of quite reasonable adjudication. The people of the United States will soon have to decide how far they will indulge their appetite for coffee, sugar, steaks, and other luxuries, with attendant lip-smacking, at the cost of good-will toward, and good-will from, the rest of a world which is denied that privilege. It will then be both meaningful and important to point out to them that the good of coffee is not only obvious but trivial, while that of good-will is so central to decent human relations, and to self-respect, that it deserves to be ranked as, in comparison with coffee, a great good, one of the greatest, for those who understand their purposes and themselves. And I said that those who make the required effort of understanding would find this comparative goodness hard to deny because, on the evidence, it *is* hard to deny, and because, with such an effort, they would be in a position to see this for themselves.

(4) Mr. Bouwsma's final difficulty is, in part, quite genuine. The limited good-will that is common in ordinary social relations is also not very good, for it leads to just those divisive and parochial loyalties which are the source of bitter antagonism between groups. And the good-will that is very good is not common and hence *not* a "great good" in the lives of most men today. Hence, here again, we have a problem. But not, I think, as much a problem of sentence squeezing as of practical moral education. It would not be a bad characterization of the goal of democracy to say that it seeks to develop that social order in which the good that is excellent but uncommon can become the common possession of ordinary men. But, here again, we need recourse to just that qualifying clause that Mr. Bouwsma finds anomalous in my theory. For it is just to the extent that men *do* understand their purposes and themselves that they can make the good which has the capacity to

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satisfy them fully and on the whole the object of their *de facto* interests and desires. It was because I felt this issue to be central that I regularly wrote not of "good-will" but of "good-will *and good judgment*" as the basis for the moral order that can solve our problems.

So, here again, I think Mr. Bouwsma has made his problem unduly difficult by failing to reckon with the central factor involved. There are difficulties enough and in sober earnest in the situation which confronts us. But difficulties should not be multiplied beyond necessity by the arbitrary delimitation of the area of inquiry within which an effective solution might be found. I offer this substitute for Ockham's Razor to the analysts as a possibly useful tool in future investigations.

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NOTES AND NEWS

We regret to learn of the death of Dr. Henry Lanz, Professor of Philosophy and Slavic Languages at Stanford University, on November 1, 1945, at Palo Alto, California. His age was 59.

The Board of Officers of the American Philosophical Association takes great pleasure in announcing that the general meeting for the reception of the Seventh Series of the Paul Carus Lectures will be held in connection with a joint meeting of the Eastern, Western, and Pacific Divisions at the University of California, Berkeley, California, on December 27–29, 1945. The Carus lecturer is Professor Clarence Irving Lewis, and the general title of the series of lectures will be "Analysis of Knowledge."

All members of the Association are invited to submit papers for the joint session to the Executive Committee of the Pacific Division by November 15. All correspondence relating to the submitting of papers should be addressed to the Secretary of the Pacific Division, Professor E. W. Strong, University of California, Berkeley, California.

The Semi-Annual Meeting of the Conference on Methods in Philosophy and the Sciences will be held at the New School for Social Research, on Sunday, November 25, 1945. The subject of the Conference will be "Methods of Social Planning." At the morning session, under the title "Methods of Determining Objectives in Social Planning" the papers will be: "The Economic Approach" by John M. Clark (Columbia University); "The Psychocultural Approach" by Lawrence K. Frank (Caroline Zachary Institute of Human Development). Discussion by Adolph Lowe, Gregory Bateson. At the afternoon session the general subject will be "Methods of Institutional and Regional Planning," with papers as follows: "Urban Planning" by Talcott Parsons (Harvard University); "Reorganization of Congress" by George B. Galloway (Congressional Committee on the Organization of Congress). Discussion by Charles Ascher, Phillips Bradley.

In a letter from Paris dated October 15, 1945, Professor Alexandre Koyré writes as follows:

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"People are tired and think chiefly about immediate material problems. Thus they have no time and no—or at least not much—energy left for thinking about more important things.

"Still, there are a lot of interesting books, written and published chiefly during the first three years of occupation. Robin published a new translation of Plato, and a very good book on the Greek skeptics, a book on Aristotle, and a volume of his articles; Renaudin a very interesting book on Machiavelli; Lenoble a thick volume on Mersenne, Sationnier de Gaudillée, a book on Nicholas of Cues. Many new translations of classical works—Hegel's *Phenomenology*. There will be a book on Hegel (a thesis) by Hippolite.

"But the younger generation is no longer interested in history. They are all under the influence of J. P. Sartre—phenomenologists and existentialists. Strange as it may seem, Heidegger has never had as many followers as today. And, owing to the fact that Sartre himself, as well as some others, G. de Beaumont, Camus, are not only gifted philosophers, but just as gifted (or even more so) as playwrights and novelists, and that they present their philosophy not only in technical books—unreadable but avidly read—but also in novels, plays, and essays, they have gained a very large audience. You know the rôle played in France by literature. . . ."

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